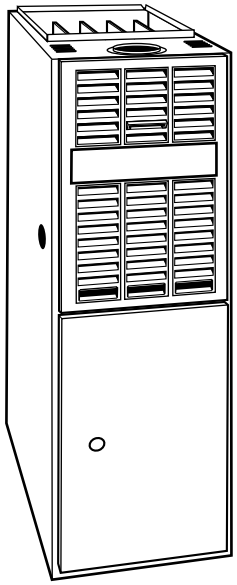
Carrier®
HEATING & COOLING

Product Data

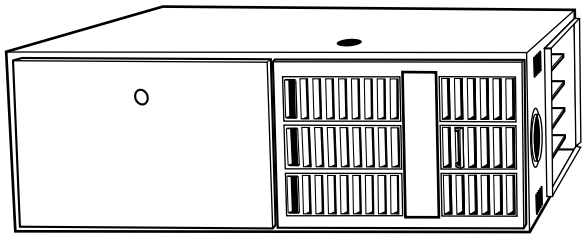
58UXT

WeatherMaker® 8000 Two-Speed Energy-Efficient Upflow/Horizontal Furnace

Input Capacities:
60,000 thru 120,000 Btuh



UPFLOW



HORIZONTAL

Two-Speed Heating for Energy-Efficient Gas Furnaces

Carrier leads the industry with our WeatherMaker® 8000 Two-Speed Upflow/Horizontal Induced-Combustion Gas Furnace. This furnace can operate at 2 different speed settings which provide outstanding home comfort. The WeatherMaker 8000 Two-Speed is built with the most advanced manufacturing equipment, processes, and technology available in order to ensure top quality. Packed into the cabinet are the industry's foremost dealer and homeowner features.

These 2-speed induced-combustion, gas-fired furnaces offer not only low installation costs, but fuel economy as well—delivering an Annual Fuel Utilization Efficiency (AFUE) rating of 80.0 percent. The WeatherMaker 8000 Two-Speed utilizes a hot surface, silicon carbide ignition system to save energy and increase reliability.

Our design uses the patented S-shaped 4-pass heat exchanger, a soft mount 2-speed inducer assembly, and a 2-stage slow-opening gas valve to minimize sound level. The Super-S heat exchanger provides better heat transfer while enabling us to make a compact furnace. This provides more room in closet, utility room, and short basement installations. The heat exchanger is constructed of aluminized steel and is backed by a 20-year Limited Warranty.

The WeatherMaker 8000 Two-Speed will meet your home heating requirements. This furnace

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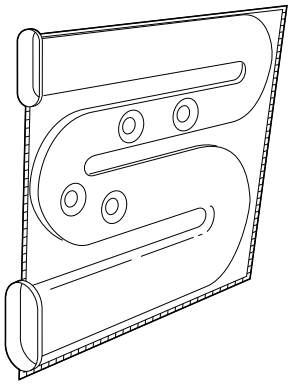
family provides a wide range of heating capacities. All models are GAMA efficiency rating certified and certified for use in California Air Quality Management Districts.

The superior attention to cabinet detail is obvious. The WeatherMaker 8000 Two-Speed features 1-piece, seamless, wrap-around construction. There are no spot welds on the exterior surfaces of the WeatherMaker 8000 Two-Speed. There is also double protection for the cabinet. First, a galvanized steel substrate provides resistance to rusting. Then the cabinet is constructed of prepainted steel—the same high-quality finish found on refrigerators and dishwashers.

Perhaps the most advanced feature of the WeatherMaker 8000 Two-Speed is the state-of-the-art microprocessor control center which shows true leadership in furnace technology. The simplified electronics in this control provide high reliability while performing many of the functions of older, electro-mechanical devices in other furnaces. The control provides blower delay at start-up and shutdown, while monitoring furnace operations and functions. In the unlikely event of a service call, in less than a minute, the technician can use the self-test feature to determine if a major component has failed. The control will check itself; then the low and high inducer speeds; silicon carbide ignition; and low-, medium-, and high-speed blower. The control also features a 3-amp fuse that protects the transformer and control.

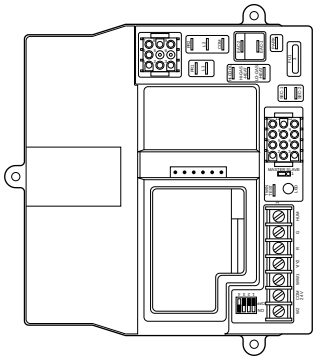
Our induced-combustion furnace has a patented draft safeguard switch. The draft safeguard switch will stop furnace operation if the vent system becomes blocked or is not operating properly.

Best of all, the WeatherMaker 8000 Two-Speed is easily installed. Many features make this furnace the easy choice for replacement or new construction markets. Left and right connections are provided for gas and electrical supplies. An easy-to-remove bottom, heating and cooling blower speed selection, low-voltage humidifier, and electronic air cleaner terminal connections are among other features.



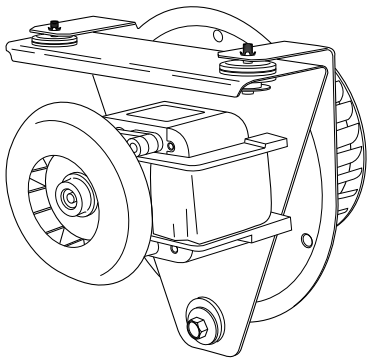
A89217

HEAT EXCHANGER



A93150

2-SPEED FURNACE CONTROL



A92074

2-SPEED INDUCER BLOWER

Model number nomenclature

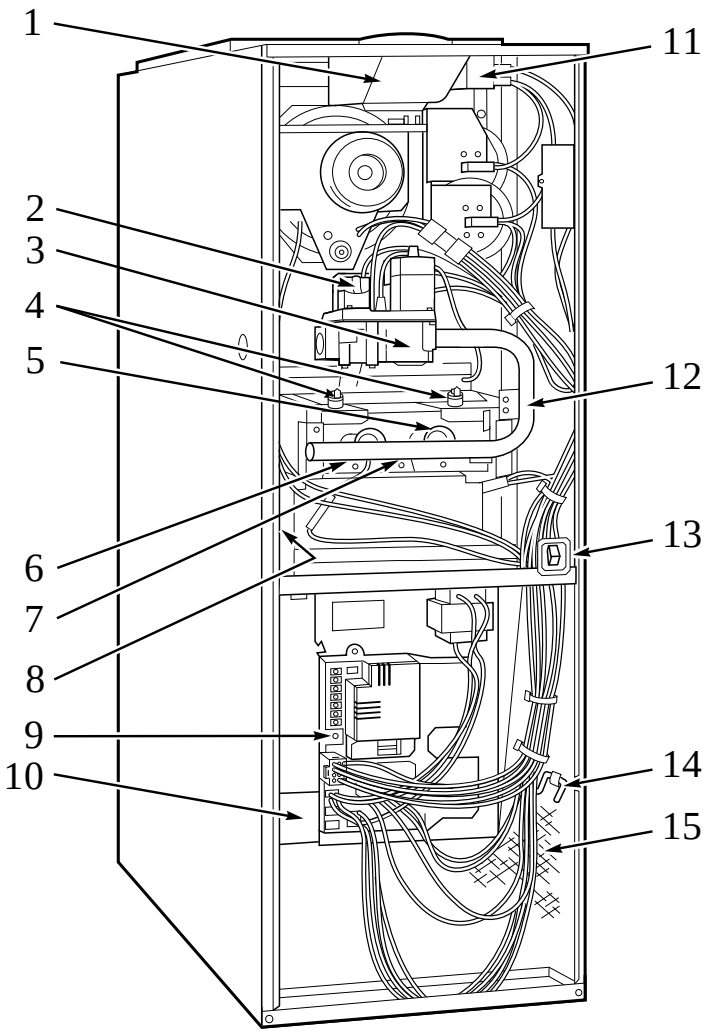
58UXT — **060** — **110** — **12**

58UXT
High-Efficiency Induced-Combustion Upflow Furnace

060
Input Capacity
060 — 60,000 Btuh
080 — 80,000 Btuh
100 — 100,000 Btuh
120 — 117,000 Btuh

110
Series Number

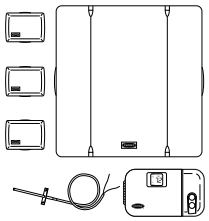
12
Nominal Cooling Size (Airflow)
(400 CFM per 12,000 Btuh)
08 — 800 CFM
12 — 1200 CFM
14 — 1400 CFM
16 — 1500 CFM
20 — 2000 CFM



NOTE: The 58UXT Furnaces are for use with natural gas, but can be field-converted for propane gas with a factory-authorized and listed accessory conversion kit.
NOTE: Control location and actual control may be different than shown above.

1. Relief Box
2. Gas Valve Control Knob or Electric Switch (On/Off)
3. 2-Stage Gas Valve
4. Manual Reset Flame Rollout Switches (2)
5. Gas Burner
6. Flame Sensor
7. Hot Surface Ignitor
8. Rating Plate
9. Status LED Light
10. Blower and Blower Motor
11. Draft Safeguard Tube and Switch
12. Gas Manifold
13. Blower Door Safety Switch
14. Filter Retainer
15. Air Filter

Carrier accessories*

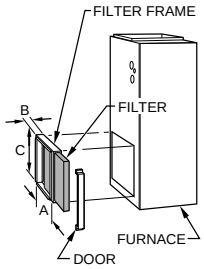


A97432

CONTROLS: THERMOSTATS AND ZONING

Available in programmable and non-programmable models. Carrier thermostats maintain a constant, comfortable temperature level in the home.

For the ultimate in home comfort, Carrier's 2, 4, and 8-zone systems allow temperature control of individual "zones" of the home. This is accomplished through a series of electronic dampers and remote room sensors. The 4-zone system is shown.

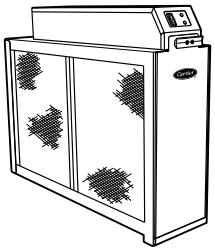


A93068

SIDE FILTER RACK

Custom-made filter rack for easy connection when a return plenum already exists. Provides easy access for cleaning filter.

A	23-1/8 in.
B	2-3/8 in.
C	14-1/2 in.

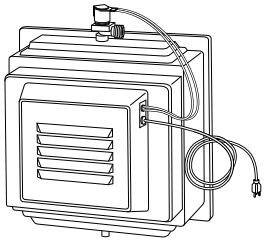


A97380

ELECTRONIC OR MECHANICAL AIR CLEANER

Cleans the air of smoke, dirt, and many pollens commonly found. Saves on decorating and cleaning expenses by keeping carpets, furniture, and drapes cleaner.

Electronic air cleaner is shown.



A91365

MODEL HUMCCLFP HUMIDIFIER

By adding moisture to winter-dry air, a Carrier humidifier can often improve comfort and keep furniture, rugs, and draperies in better condition. Moisturizing household air also helps to retain normal body heat and provides comfort at lower temperatures.

UNIT SIZE	060-12	080-16	100-16 and -20	120-20
ELECTRONIC AIR CLEANER (EAC)	Model AIRA			
MECHANICAL AIR CLEANER	Model 31MF			
HUMIDIFIER	Model HUM			
HEAT RECOVERY VENTILATOR	Models VA3B, VB5B, or VC5B			
ENERGY RECOVERY VENTILATOR	Model VL3A			
THERMOSTAT — NON-PROGRAMMABLE	Auto Changeover, °F/°C, 1-Stage Heat/1-Stage Cool — TSTATCCNAC01-B Auto Changeover, °F/°C, 2-Stage Heat/1-Stage Cool — TSTATCCNHP01-B Auto Changeover, °F/°C, 2-Stage Heat/2-Stage Cool — TSTATCCN2S01-B in AC Mode, 3-Stage Heat/2-Stage Cool in HP Mode Air Conditioner, 1-Stage Heat/1-Stage Cool, Manual Changeover, °F/°C — TSTATCCBAC01 Heat Pump, 2-Stage Heat/1-Stage Cool, Manual Changeover, °F/°C — TSTATCCBHP01**			
THERMOSTAT — PROGRAMMABLE	Auto Changeover, 7-Day Programmable, °F/°C, 1-Stage Heat/1-Stage Cool — TSTATCCPAC01-B Auto Changeover, 7-Day Programmable, °F/°C, 2-Stage Heat/1-Stage Cool — TSTATCCPHP01-B Auto Changeover, 7-Day Programmable, °F/°C, 2-Stage Heat/2-Stage Cool — TSTATCCP2S01-B in AC Mode, 3-Stage Heat/2-Stage Cool in HP Mode Dual Fuel Thermostat. Includes Outdoor Air Temperature Sensor — TSTATCCPDF01-B** Thermidistat Control — Non-Programmable/Programmable Thermostat with — TSTATCCPRH01-B** Humidity Control (For use in Dual Fuel, AC, HP, and 2S applications. Includes Outdoor Air Temperature Sensor.)			
ZONING — 2 ZONE	ZONECC2KIT01, ZONEKIT2ZCAR			
ZONING — 4 ZONE	ZONECC4KIT01			
ZONING — 8 ZONE	ZONECC8KIT01			
SIDE FILTER RACK (Accepts one 16 x 25 x 1 Filter)	KGAFR0201ALL			
TWINNING KIT†	KGATW0401HSI			
HIGH-ALTITUDE PRESSURE SWITCH KIT‡	KGAHA5501PSW			
GAS CONVERSION KIT*— NATURAL-TO-PROPANE	KGANP25012SP			
PROPANE-TO-NATURAL	KGAPN20012SP			

* Factory authorized and field installed. Gas conversion kits are A.G.A. and C.G.A. approved.
† 16 and 20 models only.
‡ 5500 ft and higher above sea level.
** Do not use in zoning heat pump applications.

Physical data

UNIT SIZE		060-12	080-16	100-16	100-20	120-20
GAS INPUT (BTUH)*	High Stage	60,000	80,000	100,000	100,000	117,000
	Low Stage	39,000	52,000	65,000	65,000	78,000
OUTPUT CAPACITY (BTUH)†	High Stage	48,000	65,000	81,000	81,000	95,000
Nonweatherized ICS	Low Stage	31,000	42,000	53,000	53,000	63,000
SHIPPING WEIGHT (LB)		134	154	166	184	194
CERTIFIED TEMP RISE	High Stage	25-55	30-60	40-70	25-55	40-70
RANGE (°F)	Low Stage	15-45	15-45	20-50	15-45	25-55
CERTIFIED EXT STATIC PRESSURE (In. wc)	Heating	0.12	0.15	0.20	0.20	0.20
	Cooling	0.5	0.5	0.5	0.5	0.5
AIRFLOW CFM‡	Heating High/Low	1170/1000	1445/1260	1410/1265	1800/1460	1775/1500
	Cooling	1195	1740	1575	2250	2025
LIMIT CONTROL		SPST (Auto-Reset)				
HEATING BLOWER CONTROL		Solid-State Time Operation				
INDUCER		2-Speed				
BURNERS (Monoport)		3	4	5		6
GAS CONNECTION SIZE		1/2-in. NPT				
GAS VALVE (Redundant) Manufacturer		White-Rodgers				
Minimum Inlet Pressure (In. wc)		4.5 (Natural Gas)				
Maximum Inlet Pressure (In. wc)		13.6 (Natural Gas)				
IGNITION DEVICE		Hot Surface				

* Gas input ratings are certified for elevations to 2000 ft. For elevations above 2000 ft, reduce ratings 4 percent for each 1000 ft above sea level. Refer to National Fuel Gas Code Table F4 or furnace Installation Instructions. In Canada, derate the unit 10 percent for elevations 2000 ft to 4500 ft above sea level.
† Capacity and AFUE in accordance with U.S. Government DOE test procedures.
‡ Airflow shown is for bottom only return-air supply. Air delivery above 1800 CFM may require that both sides, or a combination of 1 side and bottom, or bottom only of the furnace be used for return air, see Air Delivery table. Side return to be used for upflow applications only. A filter is required for each return-air supply.
ICS — Isolated Combustion System

Performance data

UNIT SIZE	060-12	080-16	100-16	100-20	120-20
DIRECT-DRIVE MOTOR Hp (PSC)	1/3	1/2	1/2	3/4	3/4
MOTOR FULL LOAD AMPS	5.1	7.4	7.9	11.0	11.1
RPM (Nominal) — SPEEDS	1075-5	1075-5	1075-4	1075-5	1075-4
BLOWER WHEEL DIAMETER X WIDTHS (In.)	10 x 6	10 x 8	10 x 8	11 x 10	11 x 10
WASHABLE 16 x 25 x 1-in. FILTER — QTY	1	—	—	2	2
WASHABLE 20 x 25 x 1-in. FILTER — QTY	—	1	1	—	—

PSC — Permanent Split Capacitor

EFFICIENCY

UNIT SIZE		060-12	080-16	100-16	100-20	120-20
CAPACITY BTUH*	High Stage	48,000	65,000	81,000	81,000	95,000
	Low Stage	31,000	42,000	53,000	53,000	63,000
AFUE%*	Nonweatherized ICS	80.0	80.0	80.0	80.0	80.0

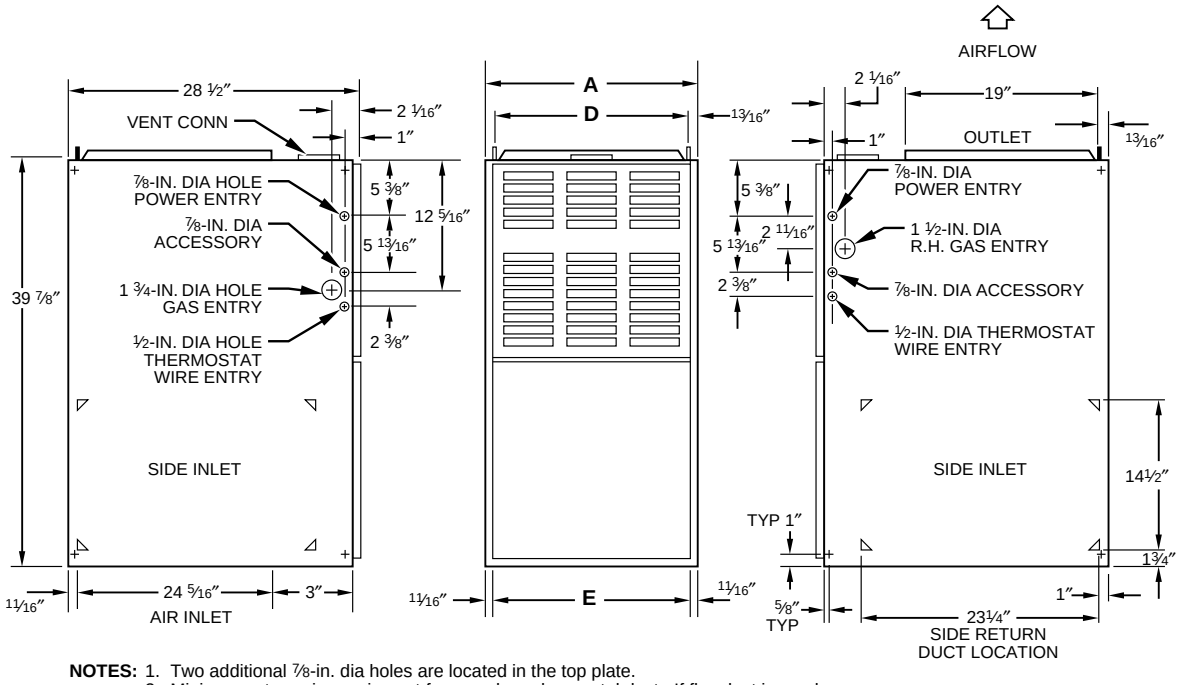
* Capacity and AFUE in accordance with U.S. Government DOE test procedures.
ICS — Isolated Combustion System

AIR DELIVERY — CFM* (With Filter)

UNIT SIZE	RETURN-AIR SUPPLY	SPEED	EXTERNAL STATIC PRESSURE (In. wc)							
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
060-12	Bottom or 1 Side	High	1430	1380	1325	1265	1195	1125	1045	945
		Med-High	1170	1150	1135	1105	1055	995	925	845
		Med	1000	1000	990	970	935	885	835	750
		Med-Low	865	870	855	840	815	780	720	655
		Low	685	690	680	665	645	610	570	500
080-16	Bottom or 1 Side	High	2010	1950	1875	1810	1740	1660	1550	1455
		Med-High	1675	1660	1625	1600	1545	1490	1395	1295
		Med	1445	1430	1415	1400	1370	1325	1265	1170
		Med-Low	1260	1260	1260	1250	1210	1180	1115	1030
		Low	950	985	985	970	950	915	845	740
100-16	Bottom or 1 Side	High	1880	1815	1745	1690	1575	1500	1400	1265
		Med-High	1660	1615	1570	1505	1435	1355	1260	1170
		Med-Low	1455	1410	1375	1350	1290	1235	1145	985
		Low	1265	1265	1240	1210	1180	1110	995	855
100-20	Bottom Only	High	2485	2480	2405	2330	2250	2155	2025	1905
		Med-High	2165	2135	2105	2055	1995	1915	1830	1735
		Med	1785	1800	1785	1760	1725	1665	1600	1490
		Med-Low	1465	1460	1470	1460	1425	1385	1330	1255
		Low	1220	1215	1210	1195	1180	1150	1095	1020
	Both Sides or 1 Side and Bottom	High	—	2465	2420	2355	2265	2165	2065	1940
		Med-High	2145	2145	2135	2090	2025	1955	1870	1780
	1 Side Only	High	2410	2345	2275	2185	2095	1995	1875	1760
		Med-High	2140	2100	2050	1985	1920	1835	1740	1635
120-20	Bottom Only	High	—	2260	2185	2085	2025	1935	1835	1730
		Med-High	2110	2070	2015	1960	1885	1810	1715	1620
		Med-Low	1790	1775	1755	1720	1670	1610	1535	1455
		Low	1495	1500	1515	1485	1450	1400	1345	1270
	Both Sides or 1 Side and Bottom	High	2425	2360	2275	2195	2095	2010	1890	1775
		Med-High	2055	2035	1995	1945	1880	1810	1735	1640
	1 Side Only	High	2245	2175	2070	1980	1900	1805	1695	1575
		Med-High	2050	1985	1925	1850	1765	1690	1585	1480

* Side return to be used for upflow applications only. A filter is required for each return-air supply opening.
—Indicates unstable operating conditions.

Dimensions



NOTES: 1. Two additional ⅞-in. dia holes are located in the top plate.
2. Minimum return-air openings at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer's recommendations for equivalent diameters.
3. Minimum return-air opening at furnace:
   a. For 800 CFM–16-in. round or 14½ x 12-in. rectangle.
   b. For 1200 CFM–20-in. round or 14½ x 19½-in. rectangle.
   c. For 1600 CFM–22-in. round or 14½ x 23¼-in. rectangle.
   d. For airflow requirements above 1800 CFM, see Air Delivery table in Product Data literature for specific use of single side inlets. The use of both side inlets, a combination of 1 side and the bottom, or the bottom only will ensure adequate return air openings for airflow requirements above 1800 CFM.

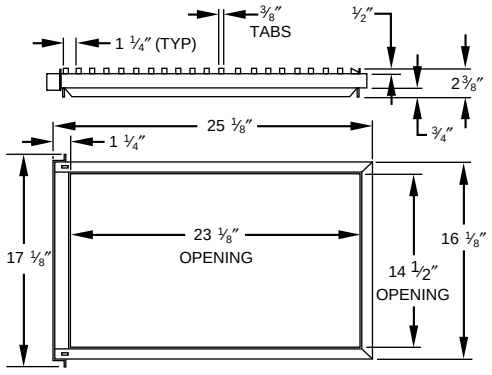
A98520

DIMENSIONS (In.)

UNIT SIZE	A	D	E	VENT CONN (Dia)*
060-12	14-3/16	12-9/16	12-11/16	4
080-16	21	19-3/8	19-1/2	4
100-16	21	19-3/8	19-1/2	4
100-20	24-1/2	22-7/8	23	4
120-20	24-1/2	22-7/8	23	5†

* Refer to the furnace Installation Instructions for proper venting procedures.
† Oval collar

ACCESSORY SIDE FILTER RACK



A80199

MINIMUM INCHES CLEARANCE TO COMBUSTIBLE CONSTRUCTION

This forced air furnace is equipped for use with natural gas at altitudes 0-10,000 ft (0-3,050m).

An accessory kit, supplied by the manufacturer,shall be used to convert to propane gas use or may be required for some natural gas applications.

This furnace is for indoor installation in a building constructed on site.

This furnace may be installed on combustible flooring in alcove or closet at minimum clearance from combustible material.

This furnace may be used with a Type B-1 Vent and may be vented in common with other gas-fired appliances.

\# For furnaces wider than 14.25 inches (362mm) may be 0 inches.

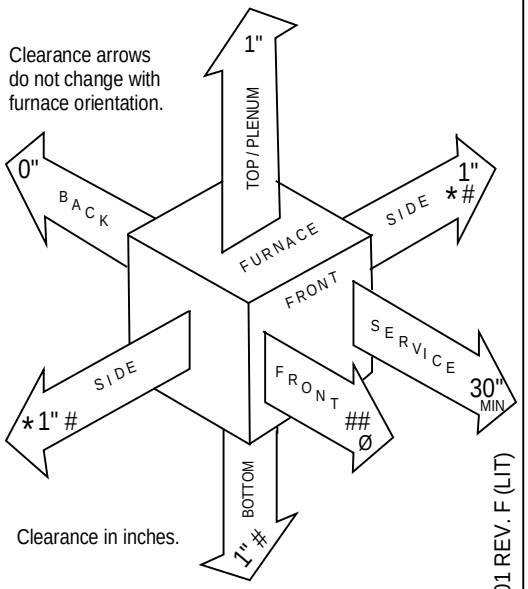
* Indicates supply or return sides when furnace is in the horizontal position. Line contact only permissible between lines formed by intersections of the Top and two Sides of the furnace jacket, and building joists, studs or framing.

Ø 18 inches front clearance required for alcove.

\# \# For single wall vent type 6 inches. For Type B-1 vent type 3 inches.

This furnace is approved for UPFLOW and HORIZONTAL installations.

Clearance arrows do not change with furnace orientation.



Clearance in inches.

Vent Clearance to combustibles:
For Single Wall vents 6 inches (6 po).
For Type B-1 vent type 1 inch (1 po).

322291-101 REV. F (LIT)

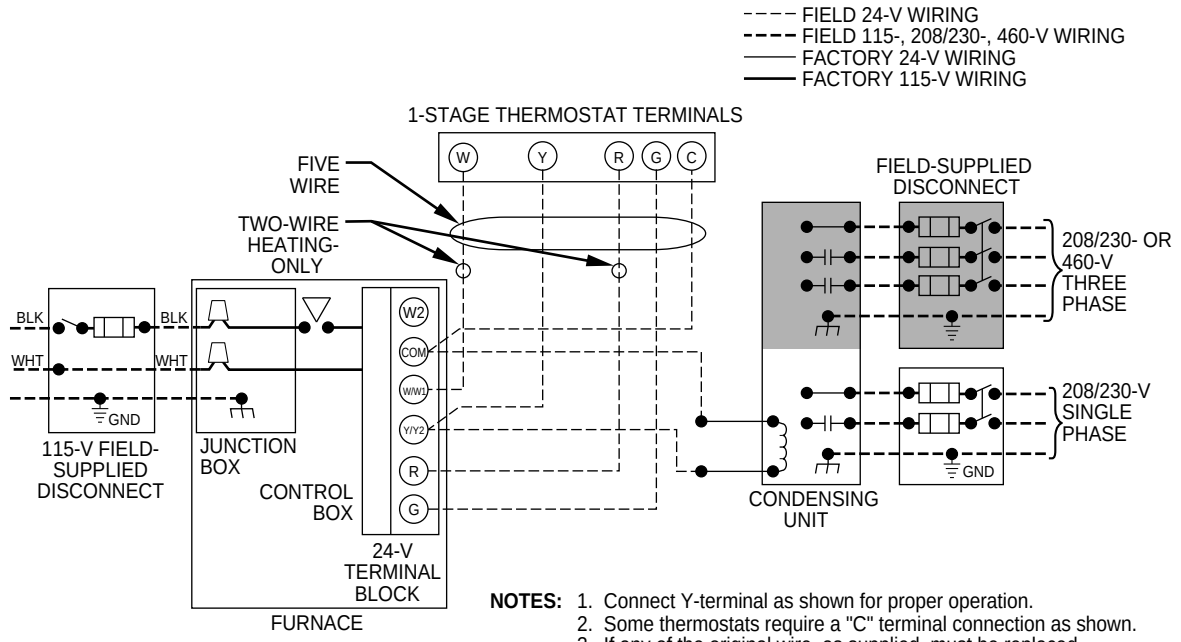
A97619

MEETS DOE RESIDENTIAL CONSERVATION SERVICES PROGRAM STANDARDS.

Before purchasing this appliance, read important energy cost and efficiency information available from your retailers.

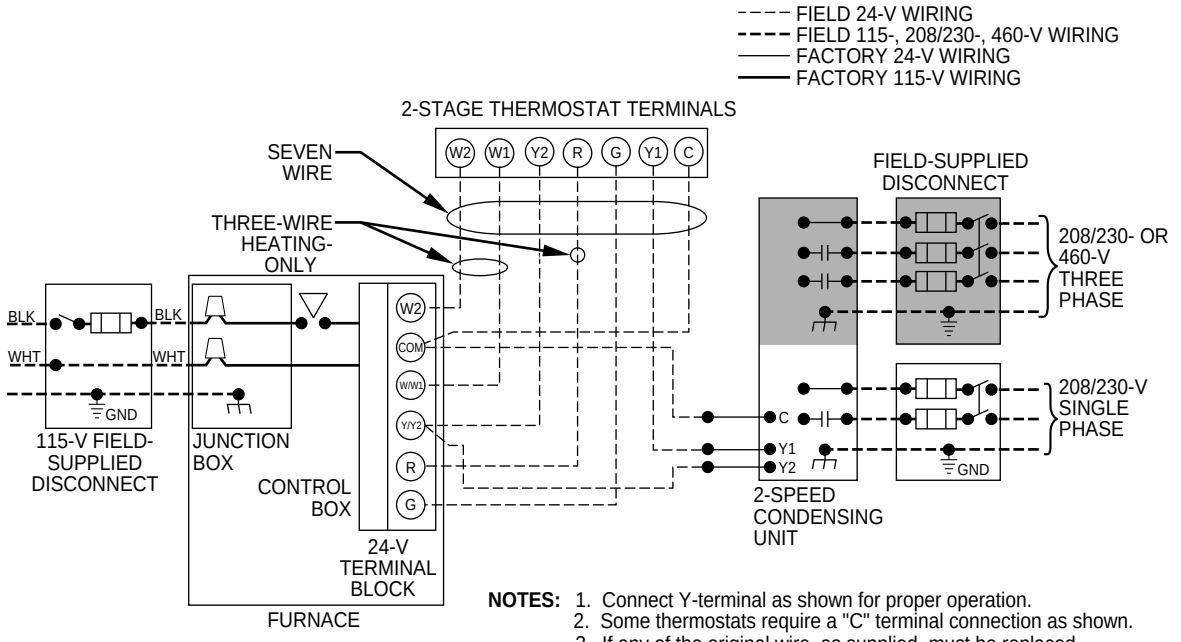
REGISTERED QUALITY SYSTEM

Typical wiring schematics



NOTES:
1. Connect Y-terminal as shown for proper operation.
2. Some thermostats require a "C" terminal connection as shown.
3. If any of the original wire, as supplied, must be replaced, use same type or equivalent wire.

A98558



NOTES:
1. Connect Y-terminal as shown for proper operation.
2. Some thermostats require a "C" terminal connection as shown.
3. If any of the original wire, as supplied, must be replaced, use same type or equivalent wire.

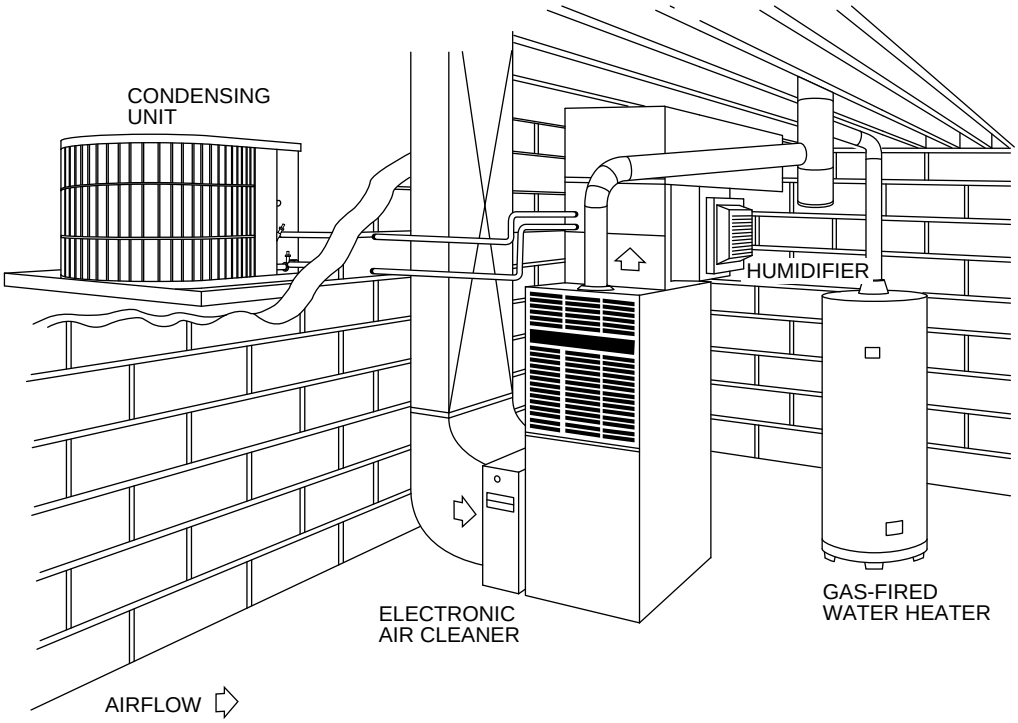
A98559

Electrical data

UNIT SIZE		060-12	080-16	100-16	100-20	120-20
UNIT VOLTS—HERTZ—PHASE		115—60—1				
MINIMUM WIRE SIZE		14	14	14	12	12
MAXIMUM WIRE LENGTH (Ft)*		35	26	28	32	31
MAXIMUM UNIT AMPS		10.5	14.2	13.2	17.9	18.2
OPERATING VOLTAGE RANGE (Min—Max)†		104—127				
MAX FUSE SIZE OR CKT BKR (Amps)‡		15	15	15	20	20
TRANSFORMER (24v)		40va				
EXTERNAL CONTROL POWER AVAILABLE	Heating	19va				
	Cooling	35va				
AIR CONDITIONING BLOWER RELAY		Standard				

* Length shown is as measured 1 way along wire path between unit and service panel for maximum 2 percent voltage drop.
† Permissible limits of the voltage range at which the unit will operate satisfactorily.
‡ Time-delay type is recommended.

Typical installations



SERVICE TRAINING

Packaged Service Training programs are an excellent way to increase your knowledge of the equipment discussed in this manual, including:

- Unit Familiarization
- Maintenance
- Installation Overview
- Operating Sequence

A large selection of product, theory, and skills programs is available, using popular video-based formats and materials. All include video and/or slides, plus companion book.

Classroom Service Training plus "hands-on" the products in our labs can mean increased confidence that really pays dividends in faster troubleshooting, fewer callbacks. Course descriptions and schedules are in our catalog.

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